

# Moving upstream: Gender norms and emerging sexual experiences in early adolescence

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## Summary

Early adolescence (ages 10-14) is a time of rapid and interconnected physical, cognitive and social changes that has special salience for sexual development. While the norms and behaviors adopted during these formative years carry lifelong sexual and reproductive health and rights (SRHR) consequences, little is known about gender attitudes and sexual experiences among young adolescents. This dissertation contributes to the field of early adolescent SRHR in three important ways. First, it provides a systematic review of the global evidence on factors that shape gender attitudes among 10-14-year-olds. The findings indicate that unequal gender attitudes are common already among young adolescents, and that the construction of such attitudes is strongly influenced by family members and peers with differential pressures and repercussions for boys and girls. The review highlights the need to not only focus on early adolescence in all relevant SDGs (health, gender equality, education) but also the need to promote gender equitable norms in adolescent-focused programming and policies. Secondly, the dissertation introduces new data on gender attitudes and romantic and sexual activities among young adolescents in Nairobi slum neighborhoods (Kenya). A core contribution is a proposed typology of romantic and sexual experiences, which can be used (and further adapted) to monitor and evaluate SRHR programming with urban poor young adolescents. Findings reveal three distinct sub-groups of romantic and sexual experiences that would not have been captured by looking only at the prevalence of single indicators such as vaginal sex, indicating the need for broader and age-appropriate measures. Third, the study adds to our current understanding on the endorsement and correlates of stereotypical gender norms related to sexuality during transitions in adolescence. Specifically, the results show that while most young adolescents in the study context have not yet initiated romantic and sexual activities, many are aware of sexual activities and endorse gendered sexual double standard norms. These findings confirm the need for early, upstream interventions that promote healthy sexual development and equitable gender norms before adolescents engage in, or are exposed to, risky sexual practices.

## Introduction

There are currently more adolescents aged 10-19 years in the world than ever before, over 1.2 billion, of whom nearly nine in ten live in low and middle-income countries (LMICs). *Young adolescents* (aged 10-14 years) account for about half of the world's population of adolescents, and their sheer size is especially large in sub-Saharan Africa [1] where the population of 10-14-year-olds is projected to grow by 34% by 2030 [2]. It is increasingly recognized that this age group face the greatest challenges and barriers to health and development [3,4]; however, as noted by UNFPA, “far too little has been done to understand and respond to their needs and rights” [5] (p. 96).

Because of the dramatic physical, social, cognitive and emotional changes that occur, the ages 10-14 are a pivotal time of human development, and the attitudes and behaviors adopted during these formative years carry lifelong sexual and reproductive health and rights (SRHR) consequences [2-4]. In particular, it is time when personal views or perceptions towards gender norms (i.e., *gender attitudes*) – which can undermine as well as promote SRHR – start to solidify [1,6]. Yet, we know very little about gender attitudes during this period of life, and about the extent to which such perceptions shape emerging romantic and sexual experiences.

By age 15, outcomes related to unsafe sexual behaviors are a leading cause of mortality and morbidity among adolescents globally, particularly in sub-Saharan Africa (SSA) [7]. Because of this, countries have increasingly invested resources in adolescent SRHR programs and services; however, the beneficiaries of such strategies tend to be those aged 15 and beyond, while younger adolescents are often overlooked [8]. Many young adolescents therefore transition into puberty without adequate knowledge and skills about puberty, fertility, and sexual relationship negotiation [4]. If we are to design program content tailored for the SRHR needs of this age group, we first need to understand rates and patterns of emerging sexual activities [9]. In order to do so, we need measures that capture the full range of adolescent romantic and sexual activities that all are part of sexual development, and which together drive SRHR outcomes [10-13].

Against this background, the research presented as part of this *Development Dissertation Brief* focuses on the construction of gender attitudes in early adolescence, and examines how such attitudes might drive romantic and sexual experiences among young adolescents in Nairobi, Kenya – a setting where gender inequalities remain pervasive. The brief draws substantially on, and includes text extracts from, my Ph.D. dissertation “A window of opportunity: Gender attitudes and patterns of romantic and sexual experiences in early adolescence”. The dissertation consists of three papers, the first of which is a systematic review on factors that shape gender attitudes among young adolescents globally (published in *PloS One*) [14]. The second and third papers (unpublished) present findings from a quantitative study undertaken with young adolescents in a Nairobi slum with the main goal to identify a typology of romantic and sexual experiences, and investigate the association between such experiences with views towards gender and sexual relationship norms. The brief is organized as follows: I begin with a background on early adolescent sexual and reproductive health and gender norms, and introduce the study context. Next, I provide an overview of the study methods and summarize the key findings for each paper. I conclude with a discussion on the policy and program implications with a specific focus on urban poor Kenya.

## Background

### **(Early) adolescent sexual behaviors in sub-Saharan Africa: a brief snapshot**

Data on sexual behaviors and associated SRHR outcomes among young adolescents is scarce in SSA and other low-and middle-income regions, as most of what we know is based on retrospective reports by older adolescents and youth in Demographic and Health Surveillance (DHS) surveys other studies [2]. DHS data from 24 countries in SSA indicate that the proportion of 15-19 year olds initiating sexual intercourse\* during early adolescence (i.e. before age 15) range from 2% (Ethiopia) to 27% (Mozambique) for boys, and from 5% (Rwanda) to 26% (Niger) for girls [15]. In Kenya, the proportion is 20% for boys and 11% for girls;

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\* Defined as penile-vaginal sexual intercourse

boys typically initiate sexual intercourse at younger ages and are more likely to have an early debut than girls [16].

While the initiation of sexual activities early adolescence is not risky *per se*, the potential consequences and circumstances associated with early sexual debut (before age 15) are. First, early sexual debut, especially when forced or coerced, increases the risk of exposure to HIV and other sexually transmitted infections [1]. Adolescents is the only age group where the prevalence of HIV has increased (from 1.4 to 1.8 million between 2005-2015), and over 80% of 15-19-year-olds living with HIV reside in SSA [17]. Secondly, early sexual activity increases the risk of maternal mortality and morbidity due to complications during pregnancy, childbirth and unsafe abortions [18]. Young adolescent girls account for 2 million out of the 7 million births occurring to girls under the age of 18 in LMICs [18], and have substantially higher risk of eclampsia, placental tears and post-partum hemorrhage compared to older peers [18]. Most pregnancies and births to young adolescent girls in SSA occur within the context of marriage and about one in ten girls marry before their 15<sup>th</sup> birthday [19]. Finally, young adolescents may have limited power in sexual and intimate relationships, particularly in relation to older partners [2]. Such power differentials are evident in high rates of coerced sexual initiation among young adolescents in SSA, particularly for girls [20,21] but also boys who may be victims both to men and women [22].

### **Measuring adolescent sexual experiences: beyond vaginal sex**

While adolescent sexual initiation is a progressive process, most research to date has classified adolescents as sexually “experienced” or “active” (or not) based on a single report of penile-vaginal intercourse [10,12,13,23]. This dichotomization is problematic as it fails to take into account the multidimensional nature of sexual feelings and awareness, romantic activities (e.g. having a boy/girlfriend) and non-coital activities (e.g. holding hands, hugging, kissing, touching), as well as vaginal, oral and anal sex [10-13,23]. A recent review on the sexual and reproductive health of young adolescents conducted by the Guttmacher Institute indicate that some boys and girls are engaging in a wide range of sexually-intimate activities even if they report never having had (vaginal) sex [2]. One example is how a study with

over 8000 12-14 year olds in four sub-Saharan African countries found that almost one in three girls and boys in Uganda and boys in Malawi and one in ten of those in Burkina Faso and Ghana reported some form of romantic or sexual experience (having boy/girlfriend, kissing, touching, intercourse) [24].

Measuring experiences beyond sexual intercourse is important as it can provide useful insight into adolescents' health and well-being [10,13,25]. Research has begun to demonstrate the relevance of distinguishing sub-groups of adolescents based on patterns of various romantic and sexual experiences. For example, a US-based study classified a sample of 1200 girls aged 12 years (whom had never had vaginal sex) into three distinct groups: those with *no* (48%), *mild* (46%, spending time along, holding hands, hugging, kissing) and *moderate* (6%, laying down together, touching on/under clothes, oral sex) sexual experiences. The moderate group was more likely than the other groups to report alcohol use, deviant peer behaviors, high impulsivity, early onset of menarche, and poor parental communication [25]. However, most studies have been conducted in North America or Western Europe and less is known about patterns of romantic and sexual experiences among young adolescents in urban poor SSA.

### **Gender norms and adolescent sexual behaviors**

Adolescent sexual behaviors and SRHR outcomes are intrinsically linked to gender, and in particular to socially constructed gender norms related to the roles, power and relationships of men, women, boys and girls [26,27]. While perceptions of the “ideal” man and woman vary across time and cultures, in most societies a set of stereotypical gender norms exists. Connell [28] describes one dominant *hegemonic masculinity* ideal, characterized by stereotypical masculine men's power over women as well as more marginalized masculine identities (e.g. men who act feminine). Evidence indicates that young men who adhere to such norms are more likely to engage in early and risky sexual behaviors including unsafe sex and concurrent partnerships [29], and to use violence in intimate relationships [30,31]. The harmful effect of masculinity norms becomes even more pronounced in the context of poverty; for example, a study in urban Mozambique found that many young poor men felt “worthless” in the eyes of girlfriends due to their inability to

provide them with gifts and money, and therefore relied on sexual prowess and violence as ways of demonstrating their male authority [32]. Hegemonic masculinity has been contrasted to *acquiescent femininity* ideals, centered on women's compliance with gender inequality and their subordination to men [33]. Young women who ascribe to a more acquiescent version of femininity have been found to experience lower control in sexual relations [31], earlier sexual initiation [26], greater partner sexual concurrency [34], greater risk of HIV and more intimate partner violence [35].

Both men and women contribute to the construction and upholding of gender norms, and it is important to note not all gender stereotypes are harmful; it is the rigidity of norms that constantly expects boys and girls to abide by gendered rules that is problematic. This dissertation focus on personal attitudes towards gender norms; that is, the extent to which young adolescents endorse dominant masculinity and femininity norms – particularly norms that perpetuate unequal power relation between men and women, or that stigmatize those who do not ascribe to culturally appropriate versions of masculinities and femininities [28]. Throughout this brief, I refer to such attitudes as *stereotypical*, *unequal* or *inequitable gender attitudes* and use the terms interchangeably.

### **The Kenyan context**

Most of the research for this dissertation took place in Nairobi, Kenya – a country which population has quadrupled from 10 million in 1967 to 46 million in 2015 [36], and is expected to reach 77 million by 2050 [37]. The population is characterized by a large youth bulb, with one in five people aged 10-19 years [37]. Kenyan adolescents are growing up in a country and region undergoing rapid socioeconomic, health and environmental changes that are the result of urbanization, increased school enrollment and availability of jobs, delayed age of first marriage and childbearing, increased use in modern contraceptives and decreased fertility rates [16,38]. However, one in four young women report an unmet need for family planning [16], abortion remains illegal (but can be permitted if a woman's health or life is in danger) [39], and homosexuality is criminalized [40]. Challenges also remain related to the country's generalized



HIV epidemic as Kenya is one of six nations that account for half of the world's adolescents living with HIV, and approximately 1.1 million children have been orphaned by AIDS [17]. Furthermore, despite improvements in gender equality, gender norms are largely patriarchal [41]. While the gender gap in education has narrowed during primary school, the proportion of adults with any secondary school is lower females than males (25% vs. 31%); women also have less labor market participation (62% vs. 72%), and hold fewer parliamentary seats and government positions than men [42]. Men head about 60% of households, and social and cultural systems dictate that women have little control in sexual relations [43]. About one in four Kenyan men and women justify wife beating under certain circumstances, reflected in the high proportion of women reporting lifetime physical (44%) and sexual violence (14%) [16].

### **A focus on urban poor young adolescents**

Urban poor adolescents and particularly those residing in slums<sup>†</sup> constitute a vulnerable and fast growing population worldwide [45]. It is estimated that 60% of the world's population will live in cities by 2030, and of these two in three will be under age 18. The massive urban growth in cities like Nairobi has been accompanied by the proliferation of sprawling slum areas, characterized by widespread unemployment, violence, limited access to basic services like water and sanitation, health care, and education [44,46]. About half (56%) of the urban population in SSA lives in slums, and this proportion is expected to grow to 70% by 2050 [47]. Growing up in slums is a threat to adolescent SRHR [45,46,48]; compared to those in non-slum urban areas, adolescents in slums have higher risk of early sexual debut, unintended pregnancy, HIV/STI, as well as maternal mortality and morbidity [46]. However, the social and physical slum environments are not only risky, but also offer opportunities for interventions –

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<sup>†</sup> While concerns have been raised about the pejorative nature of the term “slum”, it is the terminology used by the UN [44]. The UN-Habitat defines a slum as a “group of individuals that live under the same roof that lacks one or more of the following conditions; access to improved water, access to improved sanitation, sufficient living space, durability of housing and secure tenure” [61].

for example through the ability to reach a large number of people at relatively low costs [48].

This research sets in Korogocho, one of the most congested slums in Nairobi with a population of around 200,000 in an area of 0.52 km<sup>2</sup> spanning over seven villages with different ethnic groups, the main ones being Kikuyu, Luo and Luhya. Most residents have lived in Korogocho for many years, but migration in and out of the area is still fairly high. With over 250 dwelling units per hectare, most houses in are made of mud and timber with roofs of flattened tin cans [49]. Korogocho was selected as study site because of its large urban poor population, representing diverse ethnic and religious communities, and because an established sampling frame exist – the Nairobi Urban Health and Demographic Surveillance System (NUHDSS) [49].

## Data and Methods

*Systematic review:* The first paper in this dissertation is a mixed-methods systematic review to explore the factors that shape early adolescent gender attitudes in different cultural and geographical settings [14]. The study was guided by a social-ecological framework [50], highlighting how the construction of attitudes is influenced by multiple interacting factors at the *individual* (e.g. sociodemographics), *interpersonal* (e.g. family, peers) and *community/societal* (e.g. school, media) levels. Following the review of over 14000 titles/abstracts and 1400 full-texts, we included 46 quantitative, 31 qualitative and five mixed-method peer-reviewed studies conducted across 29 countries (90% located in North America and Western Europe). Data were synthesized using a mixed-methods approach, in which common associations and findings across studies were categorized using an iterative coding process and summarized into overarching themes.

*Quantitative study:* The second and third papers draw on data from a quantitative survey conducted in the Korogocho slum of Nairobi as part of the 15-country *Global Early Adolescent study*, which seeks to understand early adolescent gender norms and health in urban poor settings ([www.geastudy.org](http://www.geastudy.org)). Stratified random sampling was used to select never-married 10-14 year olds by age and sex (N=630) from the NUHDSS [49]. Data collection with 10-year olds

was however suspended due to their difficulties understanding and completing the survey, leaving 504 11-14 year olds of whom 436 were eligible for interview. The final analytical sample comprised 365 boys and girls (84% response rate) who responded to a survey covering health (physical, mental, sexual), gender norms and social-ecological influences, administered via computer-assisted personal interviews. The mean age of respondents was 12.4 years; two in three had started puberty. About one in six were single or double orphans. Among those with both parents alive, most reported feeling very close to their mother while less than half felt close to their father. Nearly all were enrolled in school, with high academic aspirations, and very few indicated ever having used alcohol or other drugs.

Latent class analysis (LCA) was used to identify sub-groups of young adolescents based on self-reported awareness about sex and involvement in various romantic and non-coital sexual activities. LCA is a sub-set of structural equation modeling with the goal to identify latent subgroups, or *classes*, of individuals who have similar response patterns across a spectrum of different binary or categorical indicator variables [51] – in this case romantic and sexual experiences. The characteristics of the identified sub-groups was investigated using latent class regression (LCR), which adds a structural piece to the model and uses this combined information to predict class membership [52]. Four scales were used to measure agreement with gender and sexual relationship norms: 1) *female sexual risk* (e.g. “girls often get into trouble when they have boyfriends”, “girls should be careful about the way they look as not to seduce men”); 2) *male sexual prowess* (e.g. “boys have girlfriends to show off to their friends”, “boys fool girls into having sex”); 3) *male sexual responsibility* (e.g. “boys should be careful not to get a girl pregnant”, “boys should not have sex until they can provide for a family”); and 4) *permissiveness towards early heterosexual relationships* (whether it is “ok” for young adolescent boys and girls to be in relationships). All scales had acceptable reliability and were measured on a 5-point scale (1=disagree a lot, 5=agree a lot).

## Key findings

### Factors that shape early adolescent gender attitudes globally

While the formation of gender norms begin at birth and continues throughout the life course, early adolescence is increasingly seen as an opportune time to transform attitudes before these become more solidified in later adolescence [1,4]. What, then, are the key factors that we should target so as to influence attitudes during this period of life?

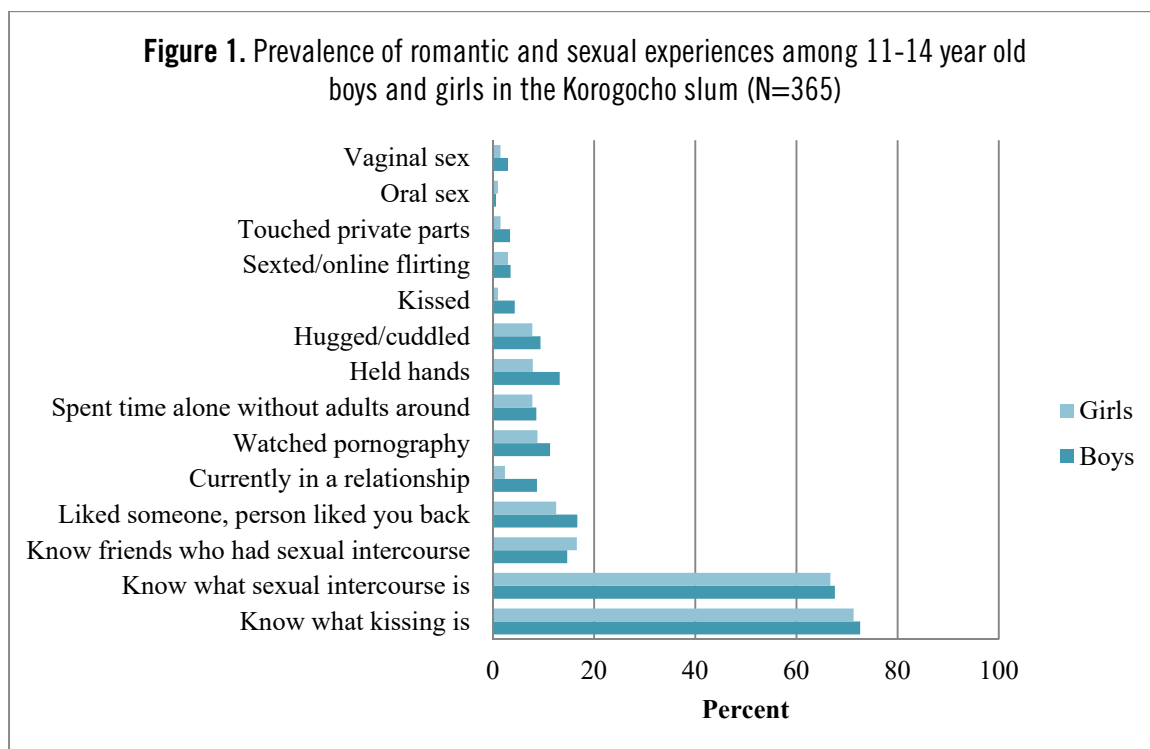
The systematic review found that young adolescents across different cultural settings commonly endorse unequal gender norms that support toughness, competitiveness and heterosexual prowess as key masculinity characteristics, while simultaneously emphasizing femininity norms predicated on vulnerability, appearance and the shaming and control of the female body and sexuality. The results further showed that the degree to which young adolescents agree with such norms vary across sociodemographic factors such as biological sex, age, race/ethnicity, immigration status, and social class. For example, findings highlighted how boys and girls experience clashing cultural gender norm messages as a result of immigration, that they co-construct gender attitudes with other social categories such race (e.g. “black” versus “white” masculinities), and that lower socioeconomic opportunities and status might limit their ability to live up to local masculinity and femininity ideals. In most of the included studies, boys were more likely than girls to support unequal gender norms and we found few examples where boys resisted or challenged such norms; rather, girls more commonly than boys spoke up against harmful gender stereotypes. This sex difference reflects differential socialization processes for boys and girls including different pressures and retributions from family and peers, who emerged as especially central influences. Girl’s gender attitudes appear to be shaped by how parents and peers exert overt and covert control over their appearance and mobility, whereas boys’ gender attitudes seem to be most closely shaped by their male peers’ physical and verbal challenging of each other, including ridicule and violence towards those who fail to perform culturally-dominant masculinity ideals. We found mixed evidence on the role of schools: three studies found a link

between exposure to sexuality education and more equitable gender attitudes; however, there was also some evidence that teachers may reinforce stereotypes by placing higher social value on “boys” activities and by policing girls’ appearance.

Taken together, the review indicates that while stereotypical gender attitudes are apparent early in adolescence, such beliefs are often ambivalent and thus amenable to change. Findings highlight the need for interventions to move beyond an individual focus to target and involve key socialization agents such as adolescent’s parents and peers. More research is needed on the role of community-related factors such as media, as we found few studies exploring how social and other forms of media contribute to the construction and negotiation of gender norms in the early adolescent years.

### **Towards a typology of early adolescent romantic and sexual experiences**

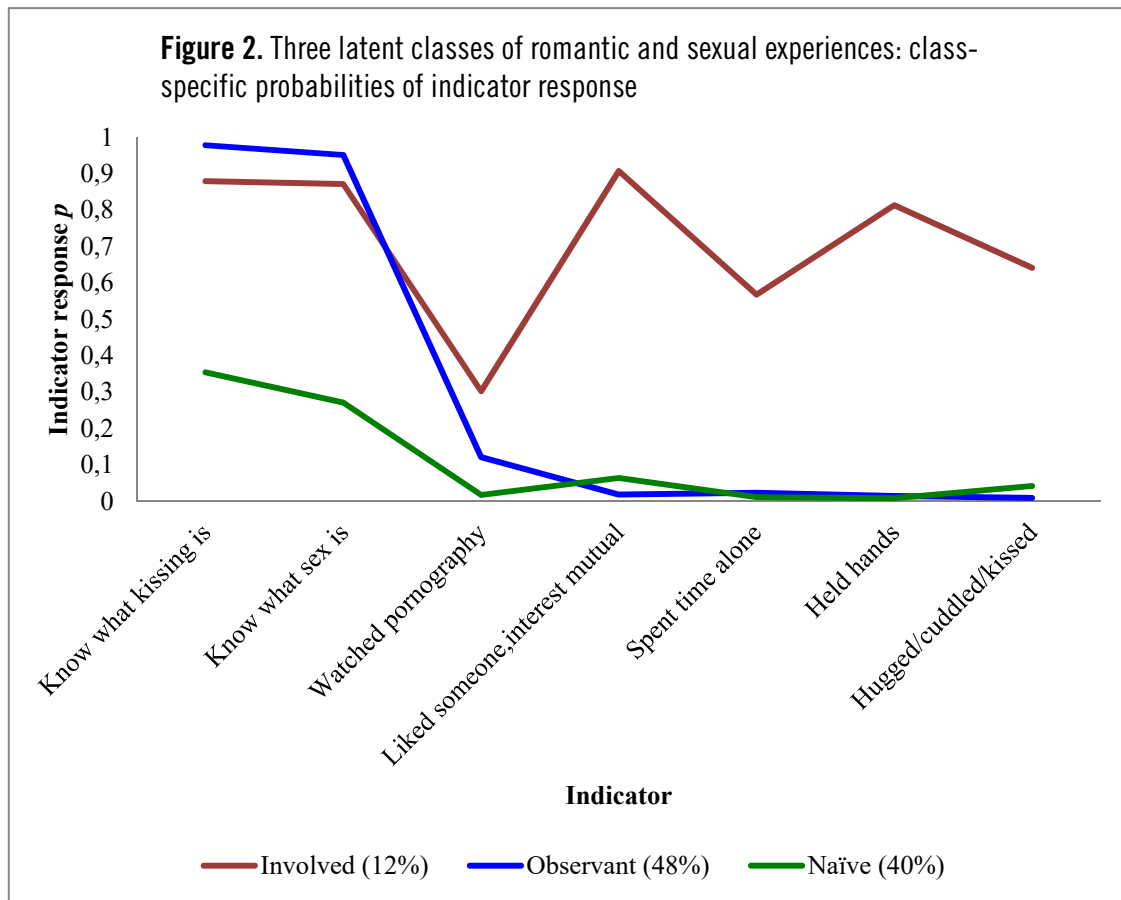
For the second paper, I examined the prevalence and patterns of romantic and sexual experiences among 11-14-year-olds in the Korogocho slum, with the central aim of developing a typology of such experiences. Consistent with previous studies conducted with young adolescents in Nairobi [53] and elsewhere in SSA [2], the prevalence of self-reported romantic and sexual experiences was low although this varied by the type of activity, with romantic interest being most commonly reported (Figure 1). About one in seven reported some form of non-coital (ranging from 2.5% touching of private parts to 10.5% for holding hands) or penetrative sexual activity (2.2% intercourse, 0.8% oral sex) Among those few (n=8) who reported ever having sexual intercourse, most said that they wanted this to happen. Awareness about sex was much higher than actual behaviors; over two thirds of respondents indicated knowing about kissing and intercourse, and some knew friends who had engaged in these behaviors.



Despite the overall low prevalence of activities, the latent class analysis revealed three distinct sub-groups based on multiple different patterns in romantic and sexual experiences<sup>‡</sup> (Figure 2): 1) *Involved* (12%, high probability of awareness about sexual activities and involvement in romantic and non-coital activities, and moderate to low probability of watching pornography; 2) *Observant* (48%, high probability of awareness about sex but low probability of personal experiences); and 3) *Naïve* (40%, moderate to low probability of sexual awareness and even lower in relation to personal experiences)<sup>§</sup>.

<sup>‡</sup> Because of the low prevalence of penetrative activities, seven variables were selected for the LCA model as shown in Figure 2: 1) *know what kissing is*, 2) *know what sexual intercourse is*, 3) *watched porn*, 4) *ever liked someone romantically and they liked you back*, 5) *spent time in private without adults around*, 6) *held hands*, and 7) *hugged/cuddled or kissed*.

<sup>§</sup> Class membership did not vary by biological sex, and the same model could be applied to boys and girls.



Involved young adolescents more commonly reported being in a relationship compared to the other two groups, and was the only group that reported fondling, vaginal or oral sex, and/or to have engaged in four or more types of sexual activities. Results from the adjusted regression models further showed that Involved young adolescents were more likely to be older; to have started puberty; and to have lost one or both parents. The latter finding that supports orphanhood as a risk factor for early sexual debut, likely due to the economic and psychosocial instability that often follows the loss of a parent [54]. In addition, the Involved group was more likely to come from the *least* poor rather than the poorest households as measured by a household wealth index. A potential explanation may be that greater access to resources allow boys and girls to negotiate sex through the exchange of money and gifts [55], as gift giving is a common and important part of romantic and sexual relationship formation and negotiation among same-aged adolescents in Kenya [56]. With the exception of age, there

were however no significant differences in the characteristics of the two largest groups – Observant vs. Naïve.

In summary, the study findings suggest that while most young adolescents in the study context have not initiated sexual activities, there are distinct sub-groups of romantic and sexual experiences – a nuance that would not have been captured by looking only at the prevalence of single indicators such as sexual intercourse. Research and programming aiming to improve adolescent SRHR thus need to use a wider range of measures to understand and respond to the emerging sexual needs of different sub-groups.

### **Are gender attitudes associated with romantic and sexual experiences?**

For the third paper, I extended the previous analysis to examine the degree to which young adolescents in Korogocho endorse gendered sexual double standard norms; their permissiveness towards early heterosexual relations; and the association between such attitudes with the identified romantic/sexual experience sub-groups. This analysis was guided by the Theory of Gender and Power [28] to highlight how gender attitudes interact with power-related factors (e.g. violence victimization/perpetration, adverse childhood experiences) and background factors (e.g. age, religion, schooling) to directly or indirectly influence sexual behaviors.

In line with the systematic review, gender attitudes were fairly stereotypical among both boys and girls; however, girls had *higher* agreement with gendered sexual double standard norms than boys (mean score 3.7 vs. 3.1 on the male sexual prowess scale and 4.1 vs. 3.8 on the female sexual risk scale). While this goes against what I hypothesized, it parallels the results from a 2016 study with 11-14-year-olds in the Kibera slum of Nairobi, where girls were more likely than boys to agree that “men rape girls because they cannot control themselves” (31% vs. 24%) and over a third agreed that it is “the girl’s duty to do whatever a man wants in marriage” [57]. One potential explanation for girls’ higher agreement with harmful norms may be that they are more acutely aware of, and exposed to, gender and power imbalances than are boys. Furthermore, both boys and girls who reported lifetime perpetration or victimization of physical violence were



more likely to endorse stereotypical gender norms, especially male sexual prowess, and to be in the Involved group. For boys, high endorsement of male sexual prowess was also associated with a greater number of adverse childhood experiences.

Gender attitudes did not vary significantly across the romantic/sexual experience sub-groups (although Involved young adolescents had higher endorsement of male sexual prowess in bivariate analysis). Rather, more permissive attitudes towards early heterosexual relationships was a more powerful correlate of romantic and sexual experiences even though most young adolescents reported an overall low acceptance of such relations (mean score 1.9 with no difference between boys and girls).

Consequently, is because of this fact – that very few respondents had been involved in sexual activities and most held unfavorable attitudes towards doing so – that makes early adolescence critical for promoting equitable gender norms and providing boys and girls with the support that they need to negotiate respectful sexual relationships.

### **Implications for policy and programs**

Over 20 years has passed since the Programme of Action of the 1994 International Conference on Population and Development (ICPD) called for “meeting the educational and service needs of adolescents to enable them to deal in a positive and responsible way with their sexuality” [58]. Since then, our understanding of adolescent sexual and reproductive health behaviors has grown substantially, and commitments towards improving adolescent SRHR have been underscored by various institutions and partnerships at different levels; yet, the needs of the youngest adolescent have frequently been overlooked as most strategies focus on those aged 15 and above [2,59].

Nonetheless, the tide is turning as the strategic value of investing in research, programs and policies targeting early adolescent SRHR and gender norms is emphasized by various global actors, such as UNFPA [18,60], WHO [59], UNICEF [6], Population Council [1] and Guttmacher Institute [2]. The findings from this dissertation can help to further shift the focus from risk reduction

approaches among older adolescents to *upstream* unfolding of attitudes and behaviors. Early investments targeting emerging sexual behaviors and gender dynamics will yield important social and economic benefits, as fewer harm-reduction investments will be required later in adolescence and adulthood [4]. The understanding of these processes thus underpins any effort to empower girls and boys to determine their future sexual and reproductive health; a focus that consistent with the Sustainable Development Goals (SDGs) 3 (*good health and well-being*), 4 (*quality education*) and 5 (*gender equality*), and the focus on adolescents in slums is further in line with goals 1 (*no poverty*) and 10 (*reduced inequalities*) [61]. In the following section I highlight key implications of this dissertation related to early prevention approaches targeting gender inequality and sexual risk in Nairobi slums.

First, a challenge in adolescent SRHR programming is how to move away from generalized efforts directed at “young people” or “at-risk youth” that do not recognize the diversity of adolescents based on factors such as age, sex, poverty, disabilities, marital and schooling status, and culture [8]. In particular, few programs have adapted their content according to adolescents varying sexual trajectories [4,12], and evaluations tend to restrict indicators to the percent reporting sexual intercourse at certain ages. For example, Kenya’s 2015 National Adolescent Sexual and Reproductive Health Policy only contain two indicators specific to young adolescents: “age at sexual debut among 12-14-year-olds” and “percent of 10-14-year-olds with comprehensive knowledge about HIV” [62], which clearly does not capture the full range of intimate activities in this age group. A key implication of this dissertation is therefore the development of a romantic/sexual experience typology among urban poor young adolescents, which to date has not been done. This typology can be used to guide, monitor and evaluate SRHR programming with young adolescents in Kenya by identifying and adapting models in line with the specific needs of certain sub-groups [9]. Because of the small sample and cross-sectional nature of the study, a critical next step will however be to build upon and validate the typology in larger populations across different socioeconomic contexts, and over time.

Secondly, stereotypical gender attitudes supporting sexual double standard norms are present already in the early adolescent years both globally and in Nairobi slums. Nonetheless, these attitudes have yet to be translated into behaviors, making this period of life essential for promoting more equitable norms. Indeed, the fact that young adolescents constitute a relatively healthy population is the very reason for why increased resources should be earmarked to this age group. Even in the Korogocho slum, an environment of high social and physical risk, most young adolescents are enrolled in school, have high academic aspirations, feel connected to their parents, few report alcohol or drugs use, and few have initiated sexual intercourse. This picture changes over the course of adolescence: evidence clearly shows that as young people enter puberty, they face differential pressures (with boys often having to help support the family financially, and girls being increasingly restricted to move outside the household), resulting in diverging health trajectories [14]. It is therefore essential to strengthen positive assets and help equip boys and girls to negotiate both the timing and circumstances of sexual relations. This is particularly true for “Observant” young adolescents who are only just starting to become aware about sex, but also for those “Naïve”. One way of doing this is to ensure access to comprehensive sexuality education (CSE) in primary school that is both age and developmentally appropriate [63]. While schools are one of the most effective areas for reaching young adolescents with CSE (given that primary education is compulsory in Kenya and most 10-14 -year-olds are enrolled [64]), the implementation of CSE is challenged by the controversies surrounding such education, and the lack of trained teachers [65]. The fact that about one in four primary school students in Kenya are behind grade for age [66] further means that some young adolescents may be too old for the content delivered, or miss out on CSE completely [67]. Policies are needed to ensure proper guidance and training of teachers in CSE so that the information provided is tailored according to the developmental readiness of young adolescents no matter their age or grade.

Third, given the link between orphanhood and sexual risk, programs and policy makers should strengthen existing social protection programs for young

adolescents in slums who have lost one or both parents. Kenya was one of the first sub-Saharan African countries to invest in social protection for orphans [68] and has launched a number of initiatives such as the Government of Kenya Cash Transfer for Orphans and Vulnerable Children Program (CT-OVC), which provide monthly unconditional transfers of approximately \$20 to households caring for OVC. However, while this program has been found to reduce the odds of early sexual debut among orphans [69], the evaluation was conducted with 15-19-year-olds, and additional studies are needed to determine the impact of cash transfers and other social protection programs throughout the course of adolescence. It is also important to consider whether and how programs can be adapted to different types of orphanhood (e.g. maternal vs. paternal).

Fourth, the central role of violence as a correlate of masculinity stereotypes support the Kenya National Adolescent SRH Policy action to “promote male involvement in prevention of sexual and gender based violence services” [62]. The findings from the systematic review clearly show how young adolescent boys use violence to control and reinforce gendered behaviors and identities; interventions thus need to support boys to challenge and resist such stereotypes, for example by using approaches that offer critical reflection on rigid masculinity norms, model alternatives, and engage men in social action to build change in their communities [29,30]. In order to change norms, programs also need to involve girls as well as boys, and move beyond an individual focus to include adolescents’ family and peer networks as well as wider social institutions.

Finally, it is important to emphasize that although early adolescence is an opportune period to promote SRHR, it does not mean that everything can be “fixed” during this life stage. Norms rarely change over night, and while it is essential to address individual attitudes, it is equally critical to understand the barriers and facilitators to transforming norms at the group and community levels.

### A note on research with 10-14-year-olds

Because of their developmental stage and limited power, research with young adolescents require careful consideration of ethical concerns, such as parental consent and adolescent assent, confidentiality and privacy during interviews, and institutional review board approvals. It also presents methodological challenges, as young adolescents typically take more time to answer questions and may need more assistance, breaks and games/interaction than older peers. While beyond the current brief, the following resources provide a helpful overview on the challenges and opportunities for working with 10-14 year olds as part of research and program initiatives:

<https://www.guttmacher.org/report/srh-needs-very-young-adolescents-in-developing-countries>

[https://www.popcouncil.org/uploads/pdfs/2016PGY\\_InvestingWhenItCounts.pdf](https://www.popcouncil.org/uploads/pdfs/2016PGY_InvestingWhenItCounts.pdf)

[http://www.who.int/reproductivehealth/publications/adolescence/rhr\\_11\\_15/en/](http://www.who.int/reproductivehealth/publications/adolescence/rhr_11_15/en/)

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